5. ADF IMAGE SCANNING SECTION

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5. ADF Image Scanning Section

[Removal and Assembly]

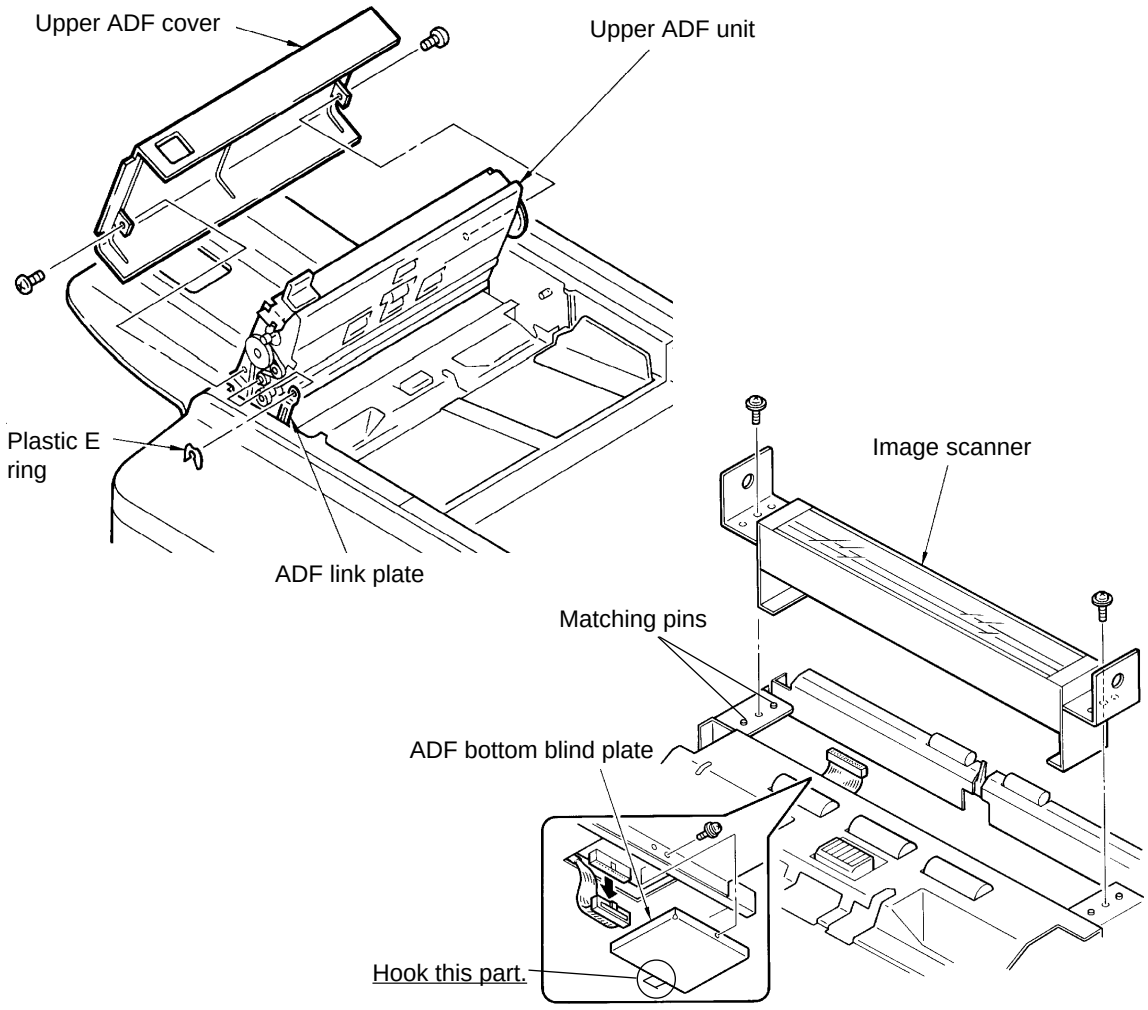
1. Image Scanner

< Removal Procedure >

1. Turn OFF the power and pull out the Master disposal box from the machine.
2. Remove the mounting screw on the ADF bottom blind plate, and remove the plate.
3. Disconnect the connector from the Image scanner.
4. Open the Upper ADF unit.
   Remove two mounting screws on the Upper ADF cover and remove the cover.
   [IMPORTANT]
   Always remove the cover. Otherwise, damage the wire harness in the unit.
5. Remove a plastic E ring securing the ADF link plate to the unit and turn aside the unit.
6. Remove two mounting screws on the Image scanner and remove the scanner.

- Precautions in Assembly -

- Place the Image scanner correctly in position by matching the holes on the scanner bracket with the pins on the ADF unit.
- Make sure to hook the projection of the ADF bottom blind plate to the frame.
- Make sure to secure the ADF link plate with a plastic E ring.



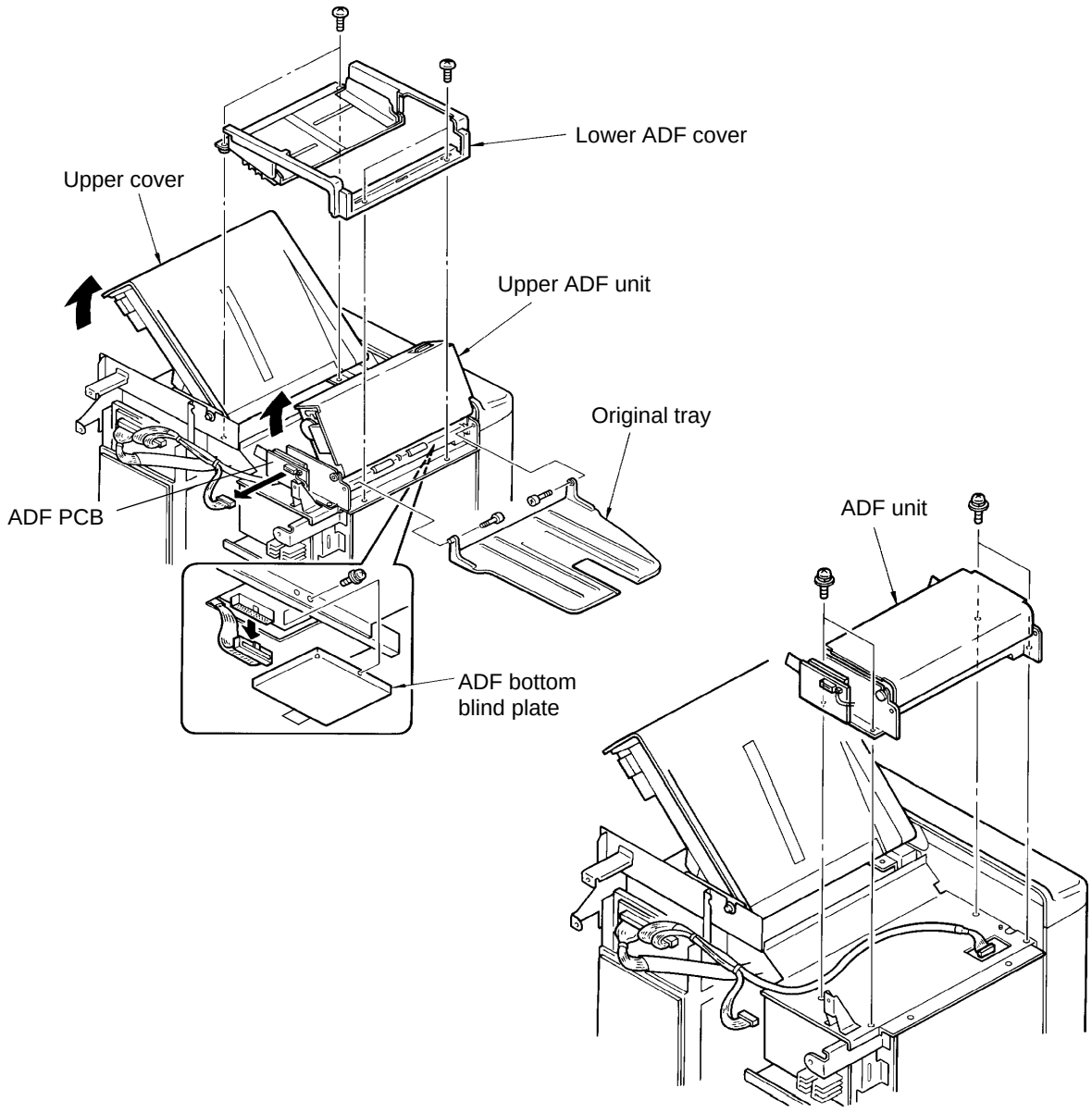
2. ADF Unit

< Removal Procedure >

1. Turn OFF the power and remove the Back cover.
2. Remove two mounting screws on the Original tray, and remove the tray.
3. Open the Upper cover and Upper ADF unit.
   Remove four mounting screws on the Lower ADF cover and remove the cover.
4. Disconnect the connector from **CN6** on the **ADF PCB**.
5. Pull out the Master disposal box from the machine.
   Remove the ADF bottom blind plate and disconnect the connector from the Image scanner.
6. Remove four mounting screws on the ADF unit and take out the unit from the machine.

- Precautions in Assembly -

- Make sure to hook the projection of the ADF bottom blind plate to the frame.



3. Original IN Sensor (Receive)

< Removal Procedure >

1. Remove the ADF unit from the machine, referring to the previous page, and turn it upside down.
2. Uuhook the Original IN sensor (receive) from the opening of the ADF unit frame by pinching the hooks of the cover with a plier.
3. Disconnect the connector from **CN4** on the **ADF PCB**.
4. Cut the wire clampers holding the wires of the Original IN sensor (receive) and remove the sensor.

- Precautions in Assembly -

- Make sure to secure the wires of the sensor with wire clampers as before removal.

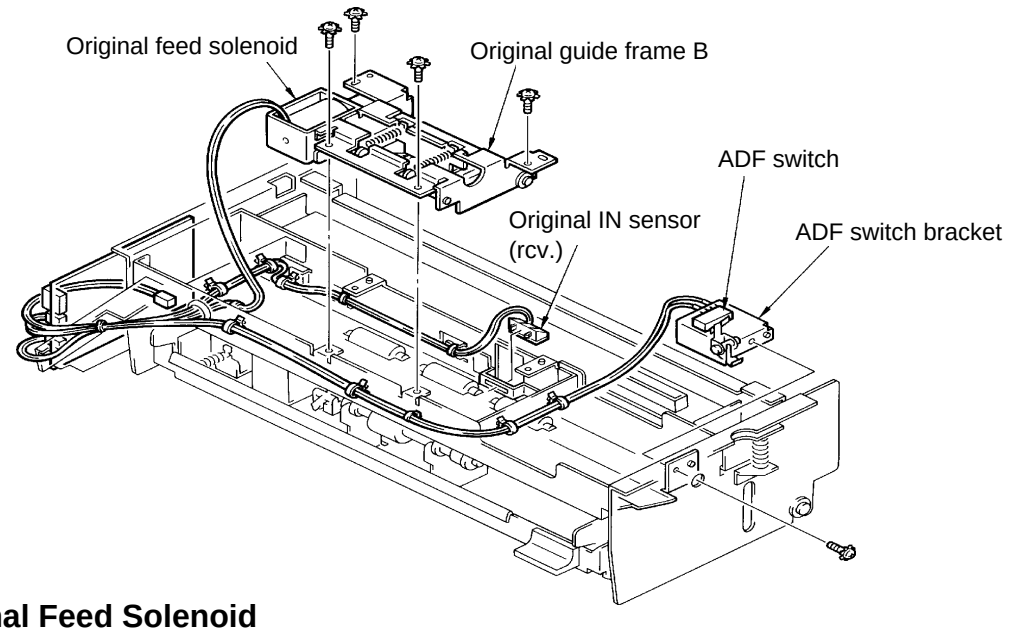
4. ADF Switch

< Removal Procedure >

1. Remove the ADF unit from the machine, referring to the previous page, and turn it upside down.
2. Remove the mounting screw of the ADF switch bracket, and remove the switch with the bracket attached.
3. Disconnect the connector from **CN7** on the **ADF PCB**.
4. Cut the wire clampers holding the wires of the ADF sw and remove the sensor from the bracket.

- Precautions in Assembly -

- Make sure to secure the wires of the switch with wire clampers as before removal.



5. Original Feed Solenoid

< Removal Procedure >

1. Remove the ADF unit from the machine, referring to the previous page, and turn it upside down.
2. Remove four mounting screws on the Original guide frame B, and remove it with the Original feed solenoid attached.
3. Disconnect the connector from **CN2** on the **ADF PCB**.
4. Cut the wire clampers holding the wires of the Original feed solenoid and remove the solenoid from the Original guide frame B.

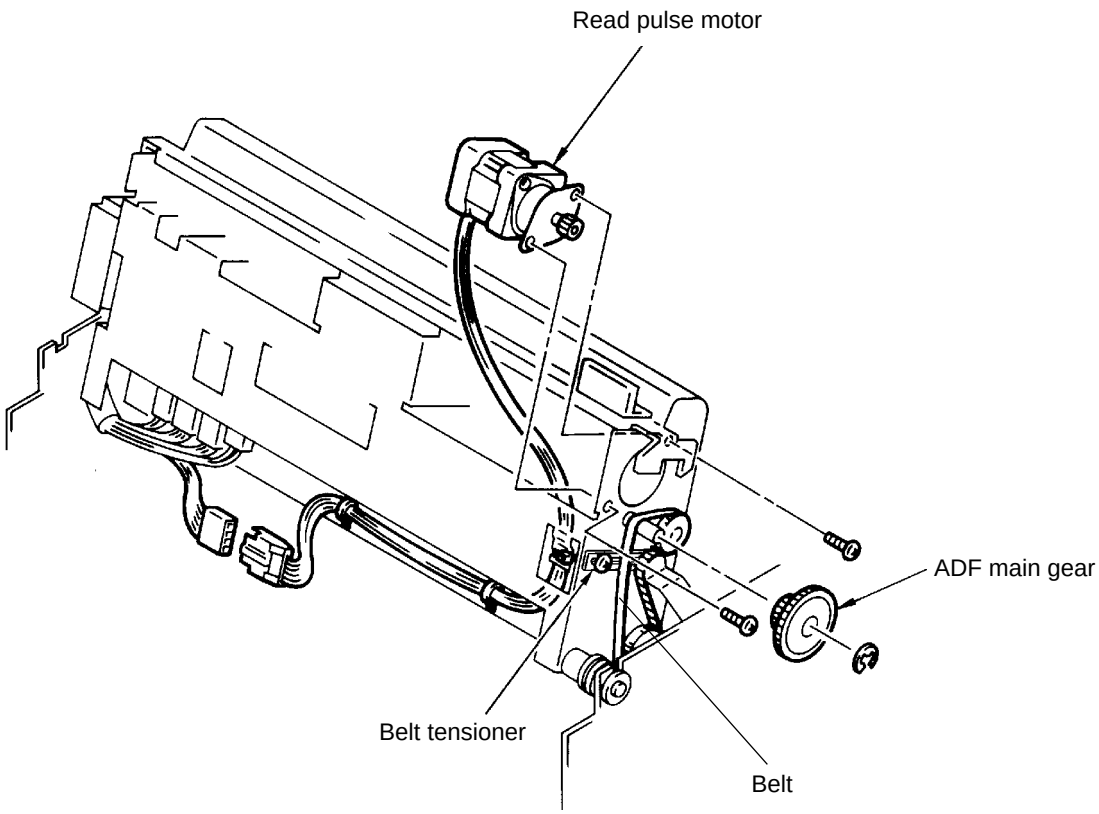
6. Read Pulse Motor

< Removal Procedure >

1. Turn OFF the power and open the Upper ADF unit.
2. Remove the Upper ADF cover, referring to page V-9.
3. Loosen the securing screw of the belt tensioner to loosen the tension of the belt on the ADF main gear.
3. Remove an E ring at the end of the shaft, and remove the ADF main gear.
4. Disconnect the connector of the Read pulse motor and cut the wire clampers holding the wires of the motor.
5. Remove two mounting screws of the Read pulse motor, and remove the motor.

- Precautions in Assembly -

- Make sure to secure the wires of the motor with wire clampers as before removal.
- Confirm that the gear of the Read pulse motor is well engaged with the ADF main gear.
- Make sure to set the tension of the belt on the ADF main gear correctly (not too loose or too tight) by adjusting the position of the belt tensioner.



7. Original Feed Motor

< Removal Procedure >

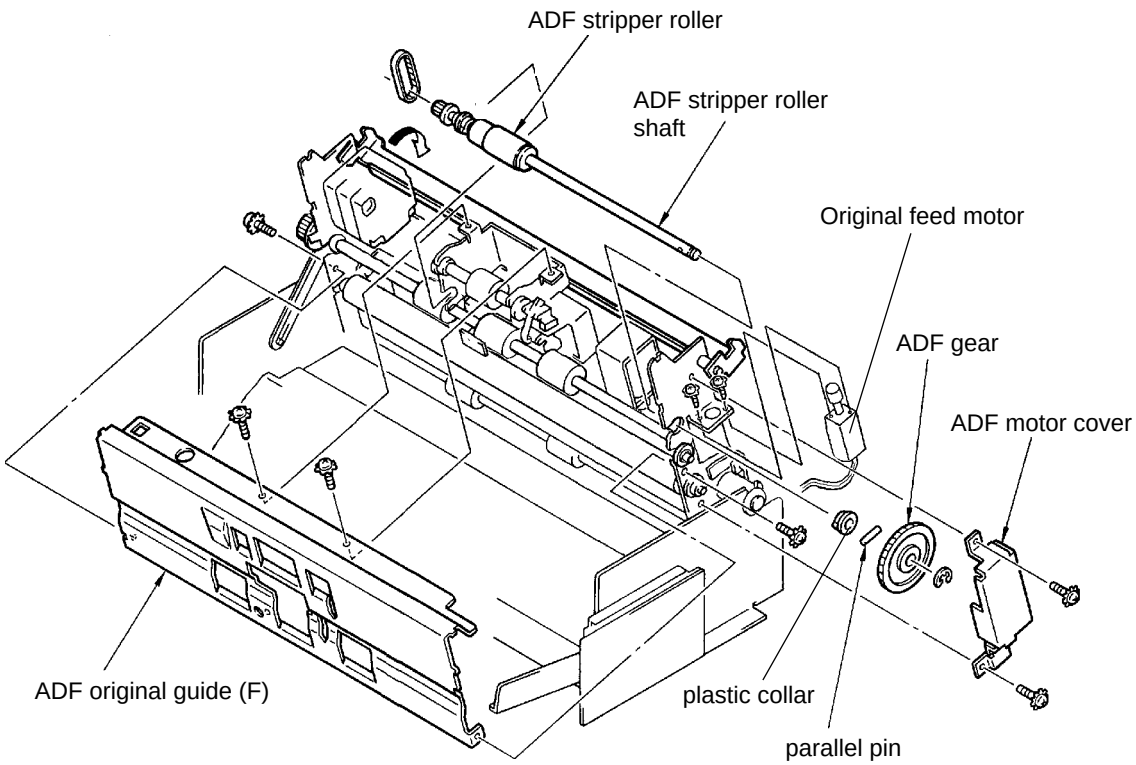
1. Turn OFF the power and open the Upper ADF unit.
2. Remove the Upper ADF cover and turn aside the Upper ADF unit, referring to page V-9.
3. Remove two mounting screws on the ADF motor cover, and remove the cover.
4. Remove an E ring at the end of the ADF stripper roller shaft, and remove the ADF gear and a parallel pin inserted into the shaft behind it.

   [IMPORTANT]

   Don't drop a parallel pin when removing the ADF gear because it will be freed.
5. Disconnect the connector of the Original feed motor and cut the wire clamper holding the wires.
6. Remove two mounting screws of the Original feed motor, and remove the motor.

- Precautions in Assembly -

- Make sure to secure the wires of the motor with a wire clamper as before removal.



8. ADF Stripper Roller

< Removal Procedure >

1. Remove the ADF gear and a parallel pin, following the steps 1 to 4 of the removal procedures of "Original Feed Motor" above.
2. Remove four mounting screws on the ADF original guide (F), and remove the guide.
3. Slide a plastic collar off the ADF stripper roller shaft and take a belt off the pulley at the other end of the shaft.
4. Remove the shaft from the Upper ADF unit frame.
   Remove an E ring on the shaft and slide the ADF stripper roller off the shaft.

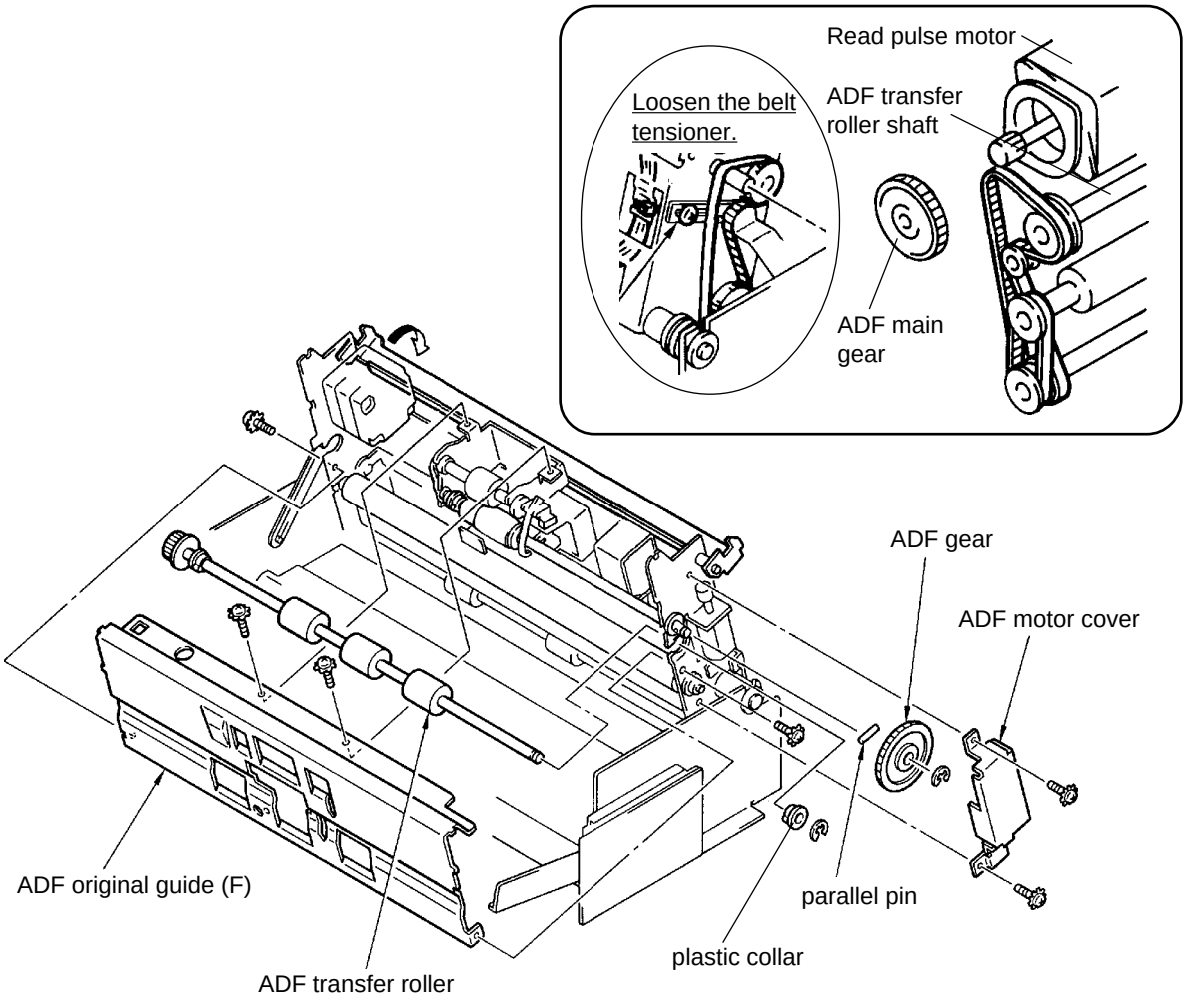
9. ADF Transfer Roller

< Removal Procedure >

1. Remove the ADF gear and a parallel pin behind it, following steps 1 through 4 of the removal procedure of "Original Feed Motor," described in the previous page.
2. Remove four mounting screws on the ADF original guide (F), and remove the guide.
3. Remove an E ring at the end of the ADF transfer roller shaft and slide a plastic collar off the shaft.
4. Loosen the securing screw of the belt tensioner to loosen the tension of the belt on the ADF main gear.
5. Remove an E ring at the end of the shaft and remove the ADF main gear.
6. Disengage the belt from the pulley at the other end of the ADF transfer roller shaft and remove the ADF transfer roller, sliding a metal bearing off the Upper ADF unit frame.
7. Remove an E ring at the end of the shaft and remove the pulley, a parellel pin and a metal bearing from the shaft.
   [IMPORTANT]
   Don't drop the parallel pin when removing the pulley because it will be freed.

- Precautions in Assembly -

- Confirm that the ADF main gear is engaged with the Read pulse motor gear.
- Ensure the tension of the belt on the ADF main gear correctly (not too loose or too tight) by adjusting the position of the belt tensioner.



10. Original Detection Sensor

< Removal Procedure >

1. Open the Upper ADF unit and remove the Upper ADF cover referring to page V-9.
2. Remove the ADF original guide (F) referring to the figure on the previous page.
3. Disconnect the relay connector for the Original detection sensor, unhook the connector of the sensor from the Upper ADF unit frame and cut the wire clamper holding the wires of the sensor.
4. Remove the sensor from the ADF sensor bracket by pinching the coverhooks with neddle-nosed pliers.

- Precautions in Assembly -

- Secure the wires of the sensor with wire clampers as before removal.

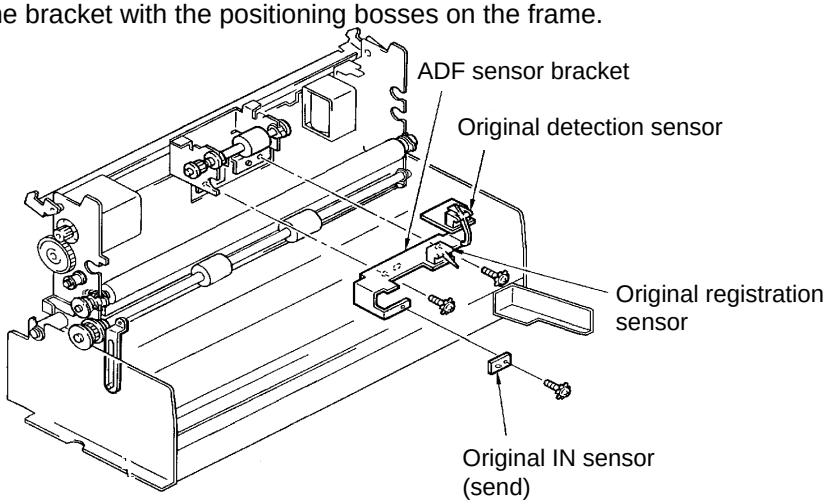
11. Original Registration Sensor

< Removal Procedure >

1. Remove the ADF transfer roller referring to the previous page.
2. Remove two mounting screws on the ADF sensor bracket and remove the bracket.
3. Disconnect the relay connector for the Original registration sensor, unhook the connector of the sensor from the Upper ADF unit frame and cut the wire clamper holding the wires of the sensor.
4. Remove the sensor from the ADF sensor bracket by pinching the coverhooks with neddle-nosed pliers.

- Precautions in Assembly -

- Secure the wires of the sensor with wire clampers as before removal.
- Match the holes on the bracket with the positioning bosses on the frame.



12. Original IN Sensor (Send)

< Removal Procedure >

1. Open the Upper ADF unit and remove the Upper ADF cover referring to page V-9.
2. Remove the ADF original guide (F) referring to the figure on the previous page.
3. Disconnect the relay connector for the Original IN sensor (send), unhook the connector of the sensor from the Upper ADF unit frame and cut the wire clamper holding the wires of the sensor.
4. Remove the mounting screw on the Original IN sensor (send) and remove the sensor.

- Precautions in Assembly -

- Secure the wires of the sensor with wire clampers as before removal.

13. ADF Pickup Roller
14. White Roller (Read Roller)
15. ADF Exit Roller

13. ADF Pickup Roller

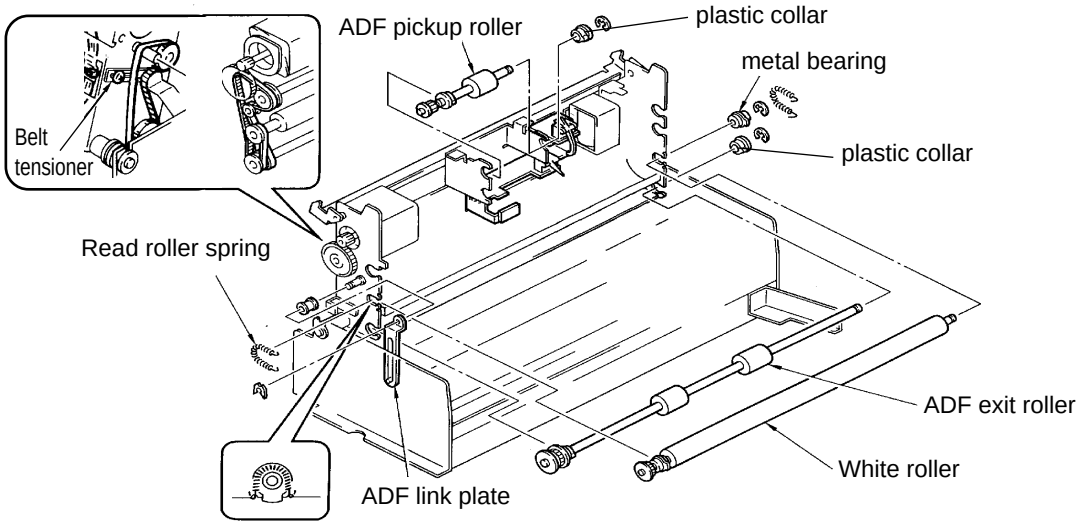
< Removal Procedure >

1. Open the Upper ADF unit and remove the Upper ADF cover, referring to page V-9.
2. Remove the ADF original guide (F), referring to the figure on page V-14.
3. Remove an E ring at an end of the ADF pickup roller shaft and slide a plastic collar off the bracket.
4. Disengage the belt from the pulley at the other end of the shaft and remove the ADF pickup roller.
5. Remove E rings on the shaft and slide off the pulley and a metal bearing.
   [IMPORTANT]
   Don't drop the parallel pin when removing the pulley because it will be freed.

14. White Roller (Read Roller)

< Removal Procedure >

1. Remove the Upper ADF cover and open the Upper ADF unit 180°, referring to page V-9.
2. Remove the ADF original guide (F) referring to the figure on page V-14.
3. Remove the Read roller springs at both ends of the White roller.
4. Remove an E ring at one end of the White roller shaft and slide a metal bearing off the shaft.
5. Disengage the belt from the pulley at the other end of the shaft and remove the ADF pickup roller.
6. Remove E rings on the shaft and slide off the pulley and a metal bearing.
   [IMPORTANT]
   Don't drop the parallel pin when removing the pulley because it will be freed.



15. ADF Exit Roller

< Removal Procedure >

1. Remove the Upper ADF cover and open the Upper ADF unit 180°, referring to page V-9.
2. Remove the ADF original guide (F) referring to the figure on page V-14.
3. Remove an E ring at one end of the ADF exit roller shaft and slide a plastic collar off the shaft.
5. Loosen the belt tension on the pulley at the other end of the shaft by loosening the screw on the belt tensioner, disengage the belts from the pulley and remove the ADF exit roller.
6. Remove an E ring at the other end of the shaft and slide off the pulley and a metal bearing.
   [IMPORTANT]
   Don't drop the parallel pin when removing the pulley because it will be freed.

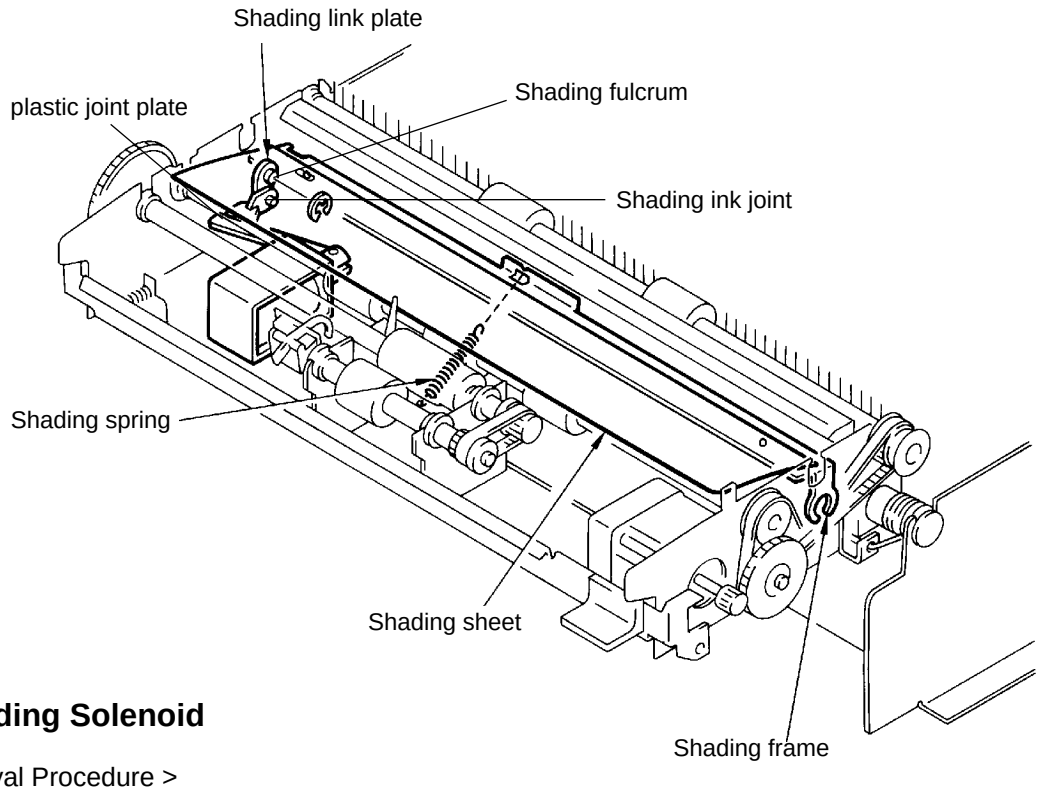
16. Shading Sheet

< Removal Procedure >

1. Remove the White roller (Read roller) referring to the previous page.
2. Remove the Shading spring.
3. Remove a plastic E ring on the Shading fulcrum and the Shading link plate from the Shading fulcrum.
4. Turn the Shading frame by 180° manually and peel the Shading sheet off the Shading frame.

- Precautions in Assembly -

- Take care not to make the Shading sheet wavy when attaching it to the Shading frame because it will hinder smooth movement of the sheet once installed.



17. Shading Solenoid

< Removal Procedure >

1. Remove the ADF stripper roller and ADF transfer roller referring to pages V-13 & V-14.
2. Remove the Original feed motor from the Upper ADF unit frame and set it aside.
3. Disconnect the relay connector for the Shading solenoid, unhook the connector of the solenoid from the Upper ADF unit frame and cut the wire clamper holding the wires of the solenoid.
4. Remove an E ring securing the plastic joint plate of the plunger of the Shading solenoid.
5. Remove a C clip securing the plastic joint plate to the Shading link joint.
6. Remove two mounting screw of the Shading solenoid on the Upper ADF unit frame and take out the Shading solenoid, separating the plastic joint plate from the Shading link joint and frame shaft.

- Precautions in Assembly -

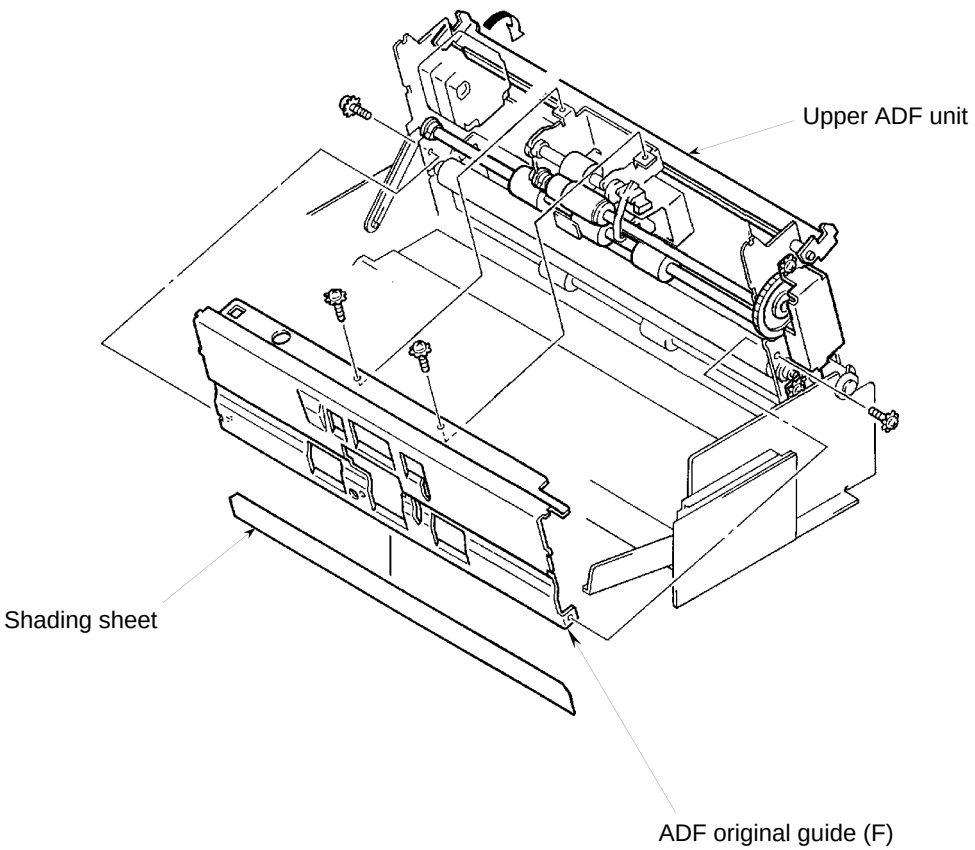
- Secure the wires of the solenoid with a wire clamper as before removal.

[Note]
On the sheet type machine (GR1750/1700), the shading sheet is attached directly on the ADF original guide (F) and fixed in position. The Shading solenoid does not exist on these two machines.

18. Shading Sheet <GR1750/1700>

< Removal Procedure >

1. Turn OFF the power and open the Upper ADF unit.
2. Remove four mounting screws on the Upper ADF cover, and remove the cover.
3. Remove four mounting screws on the ADF original guide (F), and remove the guide.
4. Peel off the Shading sheet from the ADF original guide (F), and throw away the removed sheet.

- Precautions in Assembly -

- Make sure to clean the surface of the ADF original guide (F) before placing the new Shading sheet onto the ADF original guide (F).